

Please enter the following amendment to the title:

**PNEUMATICALLY-POWERED MINE DOOR ~~INSTALLATION~~ ASSEMBLY  
WITH HYDRAULIC CHECKING SYSTEM**

Please enter the following amendment to paragraph 1 on the first page of the applications:

The present invention relates to a mine door ~~installation~~ assembly and more particularly to a pneumatically-powered mine door ~~installation~~ assembly having a hydraulic checking system.

Please enter the three following new paragraphs in the Summary of Invention section of the specification between paragraphs 9 and 10 on page 4:

One embodiment of a pneumatically-powered door assembly comprises a door frame. At least one door leaf is mounted on the door frame for swinging movement between open and closed positions for opening and closing the door assembly. An extensible and retractable pneumatically-powered actuator is mounted with a first end connected to the at least one door leaf and a second end connected to a pneumatic actuator anchor so that extension and retraction of the actuator causes the door leaf to swing back and forth between its open and closed positions. The assembly includes a hydraulic checking system for controlling the speed of the at least one door leaf as it moves between its open and closed positions. The hydraulic checking system comprises a housing containing hydraulic fluid. A piston in the housing separates the interior of the housing into a blind end fluid chamber containing a first volume of hydraulic fluid and a rod end fluid chamber containing a second

volume of hydraulic fluid. A rod extends through an opening in the housing. One end of the rod is connected to the piston in the housing and the other end of the rod is exterior of the housing. A hydraulic circuit provides fluid connection between the first and second fluid chambers. The hydraulic circuit has one or more fluid flow restrictions for providing resistance to flow of hydraulic fluid through the hydraulic circuit. The piston and rod are slidable relative to the housing to allow extension and retraction of the rod with respect to the housing. The rod is connected to either the door leaf or a hydraulic checking system anchor and the housing is connected to the other of the door leaf and the hydraulic checking system anchor so that swinging movement of the door leaf causes the rod to extend or retract with respect to the housing. Extension or retraction of the rod requires hydraulic fluid to flow through the one or more fluid flow restrictions. The stroke of the rod as the at least one door leaf moves from its closed to its open position is less than the stroke of the pneumatic actuator as the at least one door leaf moves from its closed position to its open position.

Another embodiment of a pneumatically-powered door assembly comprises a door frame. First and second door leafs are mounted on opposite sides of the door frame for swinging movement between open and closed positions. For each of the first and second door leafs an extensible and retractable pneumatically-powered actuator is mounted with a first end connected to the respective door leaf and a second end connected to a pneumatic actuator anchor so that extension and retraction of the actuator causes the respective door leaf to swing back and forth between its open and closed positions. A hydraulic checking system controls the speed of the first and

second door leafs as they swing between their open and closed positions. The hydraulic checking system comprises first and second housings containing hydraulic fluid. A first piston is located within the first housing and a second piston is located within the second housing, each of the first and second pistons separate the interior of the respective housing into a first fluid chamber containing a first volume of hydraulic fluid and a second fluid chamber containing a second volume of hydraulic fluid. A hydraulic circuit provides fluid connection between the first and second fluid chambers of each housing. The hydraulic circuit has one or more fluid flow restrictions for providing resistance to flow of hydraulic fluid through the hydraulic circuit. A first rod extends through an opening in the first housing and has one end connected to the first piston and the other end on the exterior of the first housing. A second rod extends through an opening in the second housing and has one end connected to the second piston and the other end on the exterior of the second housing. Each piston and rod is slidable relative to the respective housing to allow extension and retraction of the rod with respect to the housing. The extension and retraction of either rod requires hydraulic fluid to flow through the one or more fluid flow restrictions. Each rod is connected to either the respective door leaf or a hydraulic checking system anchor. Each housing is connected to the other of the respective door leaf or the hydraulic checking system anchor so that swinging movement of the first and second door leafs causes the respective rod to extend or retract with respect to its housing. For each door leaf the stroke of the respective rod as the door leaf moves from its closed to its open position is less than the stroke of the respective

pneumatic actuator as the door leaf moves from its closed position to its open position.

In another embodiment a pneumatically-powered door assembly comprises a door frame. At least one door leaf is mounted on the door frame for swinging movement between open and closed positions for opening and closing the door assembly. An extensible and retractable pneumatically-powered actuator is mounted with a first end connected to the at least one door leaf and a second end connected to a pneumatic actuator anchor so that extension and retraction of the actuator causes the door leaf to swing back and forth between its open and closed positions. A hydraulic checking system for controls the speed of the at least one door leaf. The hydraulic checking system comprises a housing containing hydraulic fluid. A piston in the housing separates the interior of the housing into a blind end fluid chamber containing a first volume of hydraulic fluid and a rod end fluid chamber containing a second volume of hydraulic fluid. A rod extends through an opening in the housing. One end of the rod is connected to the piston in the housing and the other end of the rod is exterior of the housing. A hydraulic circuit provides fluid connection between the first and second fluid chambers. The hydraulic circuit has one or more fluid flow restrictions for providing resistance to flow of hydraulic fluid through the hydraulic circuit. The piston and rod are slidable relative to the housing to allow extension and retraction of the rod with respect to the housing. The rod is connected to either the door leaf or a hydraulic checking system anchor and the housing is connected to the other of the door leaf and the hydraulic checking system anchor so that swinging movement of the door leaf causes the rod to extend or retract with respect to the housing. Extension or retraction of

the rod requires hydraulic fluid to flow through said one or more fluid flow restrictions. The location of the hydraulic checking anchor is selected so the ratio of the angular velocity of the door leaf to the rate at which the rod moves with respect to the hydraulic housing generally decreases as the door leaf moves along a substantial portion of the path from its closed position to its open position. The pneumatic actuator is mounted so the ratio of the angular velocity of the at least one door leaf to the rate at which the first end of the pneumatic actuator moves with respect to the second end of the pneumatic actuator generally increases as the door leaf moves along a substantial portion of the path from its closed position to its open position.

Please amend the first sentence of the abstract as follows:

A mine door ~~installation~~ assembly has a frame ~~installed in a mine passageway~~.